

**To:** Williams, Laura[williams.laura@epa.gov]  
**Cc:** Davis, Michael B.[Davis.MichaelB@epa.gov]; West, John[John.West@WestonSolutions.com]; Petri, Elliott[Elliott.Petri@WestonSolutions.com]  
**From:** Christner, Jan  
**Sent:** Mon 9/21/2015 10:00:06 PM  
**Subject:** RE: Flocculent usage

Sorry about the delay. I wasn't at the site and had to chase down logbooks.

After review of logbooks and the materials inventory, the flocculant usage in the emergency Gold King Mine ponds was as follows:

Approximately 4.2 pounds/hour (1/2 liter every 15 minutes) of Brennfloc was used to help settle solids generated during treatment with sodium hydroxide. When the treatment switched to lime, use of Brennfloc was reduced and later eliminated.

Through August 17: Treating daytime hours using approximately 4.2 pounds/hour of Brennfloc.

August 17: 24 hour/day treatment started at same flocculant rate.

August 18: Began using lime to supplement sodium hydroxide treatment, use of flocculant continued.

August 19: Lime treatment predominant. Use of flocculant reduced to approximately half.

August 20: Flocculant used minimally.

Please let me know if you need additional information.

Jan

Jan Christner

Weston Solutions, Inc.

505-269-1925 (cell)

**From:** Williams, Laura [mailto:williams.laura@epa.gov]  
**Sent:** Saturday, September 19, 2015 5:51 PM  
**To:** Christner, Jan  
**Cc:** Davis, Michael B.; West, John; Petri, Elliott  
**Subject:** Re: Flocculent usage

No, that would be great to have. Thanks, lw

Sent from my iPhone

On Sep 19, 2015, at 5:50 PM, Christner, Jan <Jan.Christner@WestonSolutions.com> wrote:

I hear that Joyel wrote up a flocculant usage document prior to the congressional hearings.  
Do you have that?

**From:** Davis, Michael B. [mailto:Davis.MichaelB@epa.gov]  
**Sent:** Saturday, September 19, 2015 5:05 PM  
**To:** West, John; Petri, Elliott; Christner, Jan  
**Cc:** Williams, Laura  
**Subject:** RE: Flocculent usage

And Laura Williams too, please.

Thanks,

Mike Davis

On-Scene Coordinator

U.S. EPA Region 7

Emergency Response & Removal

8600 NE Underground Rd, Pillar 253

Kansas City, MO 64161

Office: (913) 551-7328

Cell: (816) 682-5906

**From:** West, John [<mailto:John.West@WestonSolutions.com>]  
**Sent:** Saturday, September 19, 2015 4:26 PM  
**To:** Petri, Elliott <[Elliott.Petri@WestonSolutions.com](mailto:Elliott.Petri@WestonSolutions.com)>; Christner, Jan <[Jan.Christner@WestonSolutions.com](mailto:Jan.Christner@WestonSolutions.com)>  
**Cc:** Davis, Michael B. <[Davis.MichaelB@epa.gov](mailto:Davis.MichaelB@epa.gov)>  
**Subject:** Flocculent usage

Could one of you please provide the flocculent usage data from 8/15-8/20 to OSC Mike Davis please?

John West, PE CHMM PMP | Project Engineer | US EPA START Contractor |

Weston Solutions, Inc. | 1435 Garrison Street, Suite 100, Lakewood, CO 80215 |

[John.West@westonsolutions.com](mailto:John.West@westonsolutions.com) | O: 303-729-6148 | M: 303-748-3304 |

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